

## ABSTRACT

Disclosed are a method and system for calibrating grid parameters for a photolithographic tool. One embodiment of the invention utilizes at least two artifacts located on the wafer stage. The artifacts are located outside of the area where a substrate would be placed. Typically, four artifacts are used, with two artifacts located along the same axis. The stage moves a first artifact to the alignment system and the system measures the location of the first artifact. The stage then moves the second artifact, which is on the same axis but on the other side of the wafer stage, under the alignment system and measures the location of the second artifact. This is repeated for the other two artifacts that line up in a second axis (i.e., perpendicular to the first axis). Grid offsets are calculated to provide, for example, grid magnification and rotation calibrations.